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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,032	04/05/2000	SAMUEL C. RAMEY	5588-66325	1710

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EXAMINER	
WALSH, DANIEL I	
ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/529,032	RAMEY ET AL.	
	Examiner	Art Unit	
	Daniel I. Walsh	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-14 and 17-29* is/are rejected.

7)☒ Claim(s) *6,7,15,and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of the RCE received on 10 February 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (cited in the previous Office Action) in view of McHugh (cited in the previous Office Action).

Re claim 1, Yamamoto et al. teaches an apparatus to receive an electronic card with a monolithic ejector mechanism coupled to the body and the button, the monolithic ejector mechanism having a protrusion, the protrusion sliding against a wall of the body to eject the card

from the body upon longitudinal movement of the button relative to the body (FIG. 3+). Re claim 9, Yamamoto et al. teaches a pressing part coupled to the button (FIG. 1A).

Re claim 2, the protrusion of Yamamoto et al. includes a pivot cam configured to slide against the wall of the body so that movement of the button relative to the body causes the ejector mechanism to pivot about the pivot cam to eject the card (FIG. 4+).

Re claim 3, Yamamoto et al. teaches a notch in the button to receive a flange of the ejector mechanism for coupling (FIG. 1A+).

Re claim 4, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation is not given patentable weight. Further, the mechanism of Yamamoto et al. appears to be of a relatively flat/unitary piece of metal. Though Yamamoto et al. silent to how the metal piece is formed, it is well known and obvious that metal components can be stamped from sheet metal, especially when the component is of a unitary construction, as is the case. For example, Broschard, III et al. teaches the formation of unitary components that are stamped from sheet metal (see col 3, lines 19+). Further, it is well known and conventional in sheet metal manipulation that machine tools cut or stamp the parts and that they can be bent and shaped accordingly, as is the case with muffler assemblies, clips, etc. (see Ramey et al. US 6,091,605 and White 5,678,948). Therefore simply applying a well-known metal manipulation means to produce a metal part, would have been well known and obvious. Further, the examiner notes that the mechanism is very similar in shape/function to that claimed by the Applicant, and therefore it would be well within the art to expect such a similar device to be formed from the same metal processing.

Yamamoto et al. is silent to a body having first and second spaced apart side arms formed integrally with the body and configured to receive the card there between, the first side arm having a longitudinally extending first dovetail member and that the button has a second longitudinally extending dovetail member to mate with the first dovetail member to move longitudinally relative to the body.

The Examiner notes that it is well known for the structure of card connectors to include a body with spaces apart side arms. This is a conventional structure that provides expected results such as protection, correct orientation when the card is inserted, etc.

McHugh teaches a connector with a body having first and second spaced apart side arms formed integrally with the body and configured to receive the card there between through FIG. 1. McHugh teaches a side arm has a longitudinally extending member through the housing 12 as shown in FIG. 1, which includes a tunnel type member for accommodating actuator button 48. McHugh teaches an actuator button 48/52/53/54 having a longitudinally extending member (see FIG. 1 and FIG. 2) to contact with the first member (tunnel portion of housing 12) to allow the button to move longitudinally relative to the body. McHugh teaches an ejector mechanism coupled to the body and the button, the ejector mechanism being configured to eject the card from the body upon longitudinal movement of the button relative the body, through sliding pate 72 and lever 62 for card ejection/extraction. Though McHugh teaches a tunnel member for accommodating the actuator button, not a dovetail member, and though McHugh teaches an actuator button that connects with the tunnel member as opposed to an actuator button with a dovetail member to engage the first dovetail member, such modification would have been obvious to an artisan of ordinary skill in the art at the time the invention was made. Dovetail

members are well known and conventional for connecting members together. Further, it appears that the claimed invention would perform equally well with the dovetail accepting and engaging members as with the tunnel and corresponding member. Therefore, it would have been an obvious matter of design variation since the tunnel member taught by McHugh is functionally equivalent to the dovetail members since in both cases, fasteners are not required to couple the body to the button, and both can be used to accommodate sliding members. Furthermore, the use of dovetails are well known and conventional in the art, whether for interlocking means or for sliding means (see US 5,289,001, 6,356,457, 5,286,207, 4,091,440). Therefore, simply adapting the teaching of McHugh and replacing its tunnel and engaging member with well known female/male dovetail members would have been well known. Further, the examiner notes that dovetail members can be costly to implement (see US 4,466,049), which teaches that there are more cost effective alternatives than conventional dovetails, that are functionally equivalent (produce the desired results).

Re claim, McHugh teaches a button assembly including a first member 48 coupled to the side arm of the body through housing 50 and a pressing part 52 configured to be engage by an operator to move the first member and the pressing member relative to the body.

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Yamamoto et al. with those of McHugh.

One would have been motivated to do this to provide a conventional structure for the card connector, for the expected results of protection, reliability, and predictability that can effectively eject cards.

3. Claims 5, 8, 14, 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al./McHugh, as discussed above, further in view of Chen et al. (US 5,421,737).

The teachings of Yamamoto et al./McHugh have been discussed above. Yamamoto et al. teaches that card ejection member 64 ejects the card, and appears as an extending member. It is obvious for the member to extend downward/upwards to eject the card.

Yamamoto et al./McHugh are silent to the second flange extending through the opening formed in the body adjacent the second arm.

Chen et al. teaches such limitations (FIG. 2A).

At the time the invention was made, it would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Yamamoto et al. with those of Chen et al.

One would have been motivated to do this to provide for a channel to secure the ejector.

Re claim 8, Chen teaches that the flanges include a downwardly and outwardly extending portion located in the notches (FIG. 2A). Though the prior art is silent to the outwardly extending portions located below the button and extending under the bar, it would have been obvious to do so to secure the securing of parts.

Re claim 14, the limitations have been discussed above re claim 5.

Re claim 17, Chen et al. teaches a lip (FIG. 2A).

Re claim 18, the limitations have been discussed above. Additionally, Chen et al. teaches downward member 82/82a ejects the card.

Re claim 19, the Examiner notes that thought the prior art is silent to upturning the edge for ejection, the Examiner notes it would have been obvious to one of ordinary skill in the art to create an edge (whether upturned or downturned) in order to provide more area with to engage

the card for ejection. Having the member upturned or downturned is simply a matter of where the member is positioned relative to the height of the card edge, and is well within the skill in the art.

Re claim 20, the Examiner notes that it is conventional in the art to have ramped members. As claim 20 merely recites a ramp, but does not specify its function or purpose, the Examiner notes that it is well known to have ramps on ejector members (see FIG. 1 of US 5,791,920 and FIG. 11a of US 5,492,481 which shows the eject lever has a ramped/declined surface to the right of 248). The Examiner notes it would have been obvious to one of ordinary skill in the art to have a ramp for design constraints of the ejector mechanism.

Re claim 21, Chen et al. teaches a stop 84. As the Applicant has not specified the function of the stop, 84 is functionally equivalent to a stop as it prevents/stop/prohibits movement of the mechanism (aside from pivoting), such as sliding, bouncing, etc.

Re claims 22-23, the limitations have been discussed above re claim 8.

Re claim 24, the limitations have been discussed above re claim 1.

Re claim 25, the limitations have been discussed above re claim 9.

4. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al./McHugh, as discussed above, further in view of Cho. (US 6,091,831).

The teachings of Yamamoto et al./McHugh have been discussed above.

Yamamoto et al./McHugh are silent to the specifics of the connectivity between the first member and pressing member as set forth in the claims. The Examiner notes that means to fasten buttons, switches, pressing members, etc. to a member are well known in the art. Such

means can include physical attachment through an adhesive, mechanical attachment through pins/joints, engagements of male and female connectors, etc.

Specifically, Cho teaches connectivity of a button with a shaft member (FIG. 3). FIG. 3 teaches a detent formed on one of the first member and pressing member to secure the two upon insertion. Namely, Cho teaches a aperture formed (25) that is configured to allow detents 63 to enter and snap for connectivity. Though not domed, the detents are ramped to allow for smooth entry into the aperture. Changing the shape to domed/rounded would be an obvious matter of design variation to achieve a smooth insertion. Though arms 21 of the pressing part are not disclosed as spring arms, the Examiner notes that it would have been obvious for the arms to have some flexibility to allow the insertion of the member without snapping/causing undue stress. Though Cho is silent to a ramp portion on the pressing part, the Examiner notes that it would have been obvious to have ramped or curved portions to allow for smooth entry, much in the same was as Cho teaches the ramped detents. The Examiner notes that the limitations set forth in claims 9-11 regarding connectivity between the pressing part and first member are based upon well known and conventional means of effecting a mechanical connection between parts. The Examiner has attempted to cite teachings of connections in similar situations, but notes that general teachings of detents/connectivity involving male and female portions are still relevant.

5. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al./McHugh/Chen et al., as discussed above, further in view of Cho.

The teachings of Yamamoto et al./McHugh/Chen et al. have been discussed above.

Yamamoto et al./McHugh/Chen et al. are silent to the engaging of the pressing part and first member, as set forth in the claims.

Chen teaches such limitations, as discussed above re claims 10-13.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamamoto et al./McHugh/Chen et al. with those of Cho.

One would have been motivated to do this to have a means to secure the pressing part and first member, using well known engaged means.

Allowable Subject Matter

6. Claims 6, 7, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach the wall of the body has a curbed portion to receive and slide against the pivot cam.

Response to Arguments

8. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ho (US 5,507,658), Takano et al. (US 5,683,258), Hsia et al. (US 5,730,610), Duesterhoeft (US 5,863,212), Yamamoto et al. (US 5,899,758), Spickler et al. (US 5,967,810),

Dong (US 6,030,238), Kajiura (US 6,033,243), Tung et al. (US 6,042,402), Tung (US 6,102,720), Chen (US 6,106,313), Kariura (US 6,364,674), Furuya (US 3,925,860), Kanzaka (US 4,457,050), and Beletsky (US 2004/0226150).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel I. Walsh whose telephone number is (571) 272-2409. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel I Walsh
Examiner
Art Unit 2876

Daniel Walsh